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ARTICLE 34 AMENDMENTS

CLAIMS

1. A Doherty amplifier having:
 - a carrier amplifier which is performing a signal amplifying operation at all times irrespective of an input signal level;
 - a peak amplifier which performs an amplifying operation only when the input signal level increases to a certain level or higher to generate high power;
 - an output combiner circuit for combining the outputs of said carrier amplifier and said peak amplifier to deliver a combined output; and
 - an input branching circuit for distributing an input signal to said carrier amplifier and to said peak amplifier,
- 10 said Doherty amplifier characterized by comprising:
 - a first pre-distortion compensation circuit disposed at a stage previous to said carrier amplifier and having such characteristics that compensate said carrier amplifier for a distortion characteristically produced on the operation of said carrier amplifier; and
 - 15 a second pre-distortion compensation circuit disposed at a stage previous to said peak amplifier and having such characteristics that compensate said peak amplifier for a distortion characteristically produced on the operation of said peak amplifier.

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2. A Doherty amplifier having:
 - a carrier amplifier which is performing a signal amplifying operation at all times irrespective of an input signal level;
 - a peak amplifier which performs an amplifying operation only when the input signal level increases to a certain level or higher to generate

high power;

an output combiner circuit for combining the outputs of said carrier amplifier and said peak amplifier to deliver a combined output; and

an input branching circuit for distributing an input signal to said

10 carrier amplifier and to said peak amplifier,

said Doherty amplifier characterized by comprising:

a pre-distortion compensation circuit disposed at a stage

previous to said carrier amplifier and having such characteristics that

compensate said carrier amplifier for a distortion characteristically produced

15 on the operation of said carrier amplifier.

3. (canceled)

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4. The Doherty amplifier according to claim 1, wherein the distortion compensated for by said first and second pre-distortion compensation circuits is an amplitude-phase distortion.

5. (amended) The Doherty amplifier according to claim 2, wherein the distortion compensated for by said pre-distortion compensation circuit is an amplitude-phase distortion.

6. A method of compensating a Doherty amplifier for a distortion characteristic, said Doherty amplifier having a carrier amplifier which is performing a signal amplifying operation at all times irrespective of an input signal level, a peak amplifier which performs an amplifying operation only
5 when the input signal level increases to a certain level or higher to generate high power, an output combiner circuit for combining the outputs of said carrier amplifier and said peak amplifier to deliver a combined output, and an input branching circuit for distributing an input signal to said carrier amplifier and to said peak amplifier, said method comprising the steps of:

10 distributing an input signal to said carrier amplifier and to said peak amplifier by said input branching circuit;

compensating a signal distributed to said carrier amplifier by said input branching circuit for a distortion characteristically produced on the operation of said carrier amplifier;

15 compensating a signal distributed to said peak amplifier by said input branching circuit for a distortion characteristically produced on the operation of said peak amplifier;

amplifying the signal by said carrier amplifier after the signal has been compensated for the distortion characteristically produced on the 20 operation of said carrier amplifier;

amplifying the signal by said peak amplifier after the signal has been compensated for the distortion characteristically produced on the operation of said peak amplifier; and

25 combining the outputs of said carrier amplifier and said peak amplifier to deliver a combined output.

7. A method of compensating a Doherty amplifier for a distortion characteristic, said Doherty amplifier having a carrier amplifier which is performing a signal amplifying operation at all times irrespective of an input signal level, a peak amplifier which performs an amplifying operation only 5 when the input signal level increases to a certain level or higher to generate high power, an output combiner circuit for combining the outputs of said carrier amplifier and said peak amplifier to deliver a combined output, and an input branching circuit for distributing an input signal to said carrier amplifier and to said peak amplifier, said method comprising the steps of:

10 distributing an input signal to said carrier amplifier and to said peak amplifier by said input branching circuit;

compensating a signal distributed to said carrier amplifier by said input branching circuit for a distortion characteristically produced on the operation of said carrier amplifier, amplifying the signal by said carrier 15 amplifier after the signal has been compensated for the distortion characteristically produced on the operation of said carrier amplifier;

amplifying the signal distributed to said peak amplifier by said

input branching circuit by said peak amplifier; and

20 combining the outputs of said carrier amplifier and said peak
amplifier to deliver a combined output.

8. (canceled)

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9. The method of compensating a Doherty amplifier for a distortion characteristic according to claim 6, wherein the distortion characteristically produced on the operation of said carrier amplifier and the distortion characteristically produced on the operation of said peak amplifier
5 are amplitude-phase distortions.

10. The method of compensating a Doherty amplifier for a distortion characteristic according to claim 7, wherein the distortion characteristically produced on the operation of said carrier amplifier is an amplitude-phase distortion.

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11. (canceled)